



# ecology and environment, inc.

Global Environmental Specialists

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Seattle, Washington 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

## MEMORANDUM

DATE: August 6, 2012

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Quality Assurance Review, Avery Landing Site, Avery, Idaho**

COC: 12-05-0006-22

REF: TDDs: 12-05-0006 PANs: 002233.0790.01RA  
12-05-0007 PANs: 002233.0791.01RA  
12-05-0008 PANs: 002233.0792.01RA  
12-05-0009 PANs: 002233.0793.01RA

The data quality assurance review of 2 soil samples collected from the Avery Landing Site (consisting of the Avery Benticik, Avery IDOL, Avery FHWA, and Avery Potlatch sites) located in Avery, Idaho, has been completed. Polychlorinated Biphenyl (PCB) analysis (EPA Method 8082A) was performed by GEL Labs, Inc., Charleston, South Carolina. All sample analyses were evaluated following EPA's Stage 2 Data Validation Manual Process (S2VM) and/or Stage 4 Data Validation Manual Process (S4VM).

The samples were numbered: 12060076 12060077

### Data Qualifications:

#### 1. **Sample Holding Times: Acceptable.**

The samples were maintained at  $< 6^{\circ}\text{C}$ . The samples were collected on July 21, 2012, extracted on July 24, 2012, and were analyzed by July 26, 2012, therefore meeting QC criteria of less than 7 days between collection and water sample extraction (14 days for soils) and less than 40 days between extraction and analysis.

#### 2. **Instrument Performance: Acceptable.**

The surrogate retention time percent difference between the initial calibration standards and the remaining standards and samples was  $\leq 0.3\%$  for capillary column analyses.

#### 3. **Initial and Continuing Calibration: Acceptable.**

All initial calibration relative standard deviations (RSDs) were within QC limits. All continuing calibration % differences (% D) were within QC limits.

**4. Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

**5. Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

**6. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. System Monitoring Compounds (SMCs): Acceptable.**

All recoveries of the SMCs were within the established control limits.

**8. Blank Spike: Acceptable.**

Recoveries of all spiked analytes were within the appropriate control limits except when outside limits due to dilution and matrix interference.

**9. Duplicates: Acceptable.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits.

**10. Compound Identification: Acceptable.**

All results were dual-column confirmed with differences between the columns less than 25%.

**11. Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

**12. Laboratory Contact**

No laboratory contact was required.

**13. Overall Assessment**

The reviewer used professional judgment to apply a single bias qualifier when more than one bias qualifier was applicable to an individual estimated sample result.

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

#### Data Qualifiers and Definitions

- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- JH - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a high bias.
- JL - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a low bias.
- JK - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias.
- JQ - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias and falls between the MDL and the Minimum (or Practical) Quantitation Limit (MQL, PQL).
- N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
- NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : Ecology and Environment, Inc.  
Address : 720 Third Ave  
Suite 1700  
Seattle, Washington 98104  
Contact: Mr. Steve Hall  
Project: Project No. 4500000347

Report Date: July 27, 2012

Client Sample ID: 12060076  
Sample ID: 308397001  
Matrix: Soil  
Collect Date: 21-JUL-12 09:00  
Receive Date: 24-JUL-12  
Collector: Client  
Moisture: 23.2%

Project: ECOL00801  
Client ID: ECOL008

Parameter	Qualifier	Result	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-Volatiles-PCB</b>										
<i>SW846 3541/8082A PCB Solid Automated Soxhlet "Dry Weight Corrected"</i>										
Aroclor-1016	U	ND	21.6	ug/kg	5	JXM	07/26/12	1007	1232183	1
Aroclor-1221	U	ND	21.6	ug/kg	5					
Aroclor-1232	U	ND	21.6	ug/kg	5					
Aroclor-1242	U	ND	21.6	ug/kg	5					
Aroclor-1248	U	ND	21.6	ug/kg	5					
Aroclor-1254	U	ND	21.6	ug/kg	5					
Aroclor-1260	U	ND	21.6	ug/kg	5					
Aroclor-Total	U	ND	21.6	ug/kg	5					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3541	Prep Method 3541 PCB Prep Soil	AXV1	07/24/12	1814	1232182

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 3541/8082A	

Surrogate/Tracer recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
4cmx	SW846 3541/8082A PCB Solid Automated Soxhlet "Dry Weight Corrected"	5.01 ug/kg	8.65	57.9	(25%-112%)
Decachlorobiphenyl	SW846 3541/8082A PCB Solid Automated Soxhlet "Dry Weight Corrected"	5.73 ug/kg	8.65	66.2	(19%-130%)

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Moisture: 23.9%

Project: ECOL00801  
Client ID: ECOL008

Parameter	Qualifier	Result	RL	Units	DF	Analyst	Date	Time	Batch	Method
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Aroclor-1232	U	ND	21.8	ug/kg	5					
Aroclor-1242	U	ND	21.8	ug/kg	5					
Aroclor-1248	U	ND	21.8	ug/kg	5					
Aroclor-1254	U	ND	21.8	ug/kg	5					
Aroclor-1260	U	ND	21.8	ug/kg	5					
Aroclor-Total	U	ND	21.8	ug/kg	5					

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Surrogate/Tracer recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
4cmx	SW846 3541/8082A PCB Solid Automated Soxhlet "Dry Weight Corrected"	4.53 ug/kg	8.74	51.9	(25%-112%)
Decachlorobiphenyl	SW846 3541/8082A PCB Solid Automated Soxhlet "Dry Weight Corrected"	4.97 ug/kg	8.74	56.9	(19%-130%)